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May 29, 2018

VIA ELECTRONIC FILING

The Honorable Jocelyn G. Boyd
Chief Clerk/Administrator
Public Service Commission of South Carolina
101 Executive Center Drive, Suite 100
Columbia, South Carolina 29210

Re: **Duke Energy Progress, LLC – Monthly Power Plant Performance
Report
Docket No. 2006-224-E**

Dear Ms. Boyd:

Pursuant to the Commission's Orders in Docket No. 1977-354-E, enclosed for filing is the Monthly Power Plant Performance Report in Docket No. 2006-224-E for the month of April 2018.

Should you have any questions regarding this matter, please do not hesitate to contact me at 803.988.7130.

Sincerely,

Rebecca J. Dulin

Enclosure

cc: Ms. Dawn Hipp, Office of Regulatory Staff
Mr. Jeffrey M. Nelson, Office of Regulatory Staff
Ms. Shannon Bowyer Hudson, Office of Regulatory Staff
Ms. Nanette Edwards, Office of Regulatory Staff
Michael Seaman-Huynh, Office of Regulatory Staff
Ms. Heather Shirley Smith, Duke Energy
Mr. Scott Elliott, Elliott & Elliott, P.A.
Mr. Garrett Stone, Brickfield, Burchette, Ritts & Stone, PC
Mr. Gary Walsh, Walsh Consulting, LLC

Duke Energy Progress
Base Load Power Plant Performance Review Plan

Period: April, 2018

Station	Unit	Date of Outage	Duration of Outage	Scheduled / Unscheduled	Cause of Outage	Reason Outage Occurred	Remedial Action Taken
Brunswick	1	03/03/2018 - 04/04/2018	84.52	Scheduled	End-of-cycle 22 refueling outage (B1R22)	Scheduled refueling outage	Complete scheduled refueling outage
	1	04/04/2018 - 04/04/2018	2.12	Scheduled	Turbine overspeed trip test	Scheduled overspeed trip test	Completed scheduled test
	1	04/07/2018 - 04/09/2018	62.25	Unscheduled	Unit tripped due to turbine control system logic	Stator water cooling low flow trip	Repaired modification logic
	2	None					
Harris	1	04/07/2018 - 05/01/2018	573.85	Scheduled	End-of-cycle 21 refueling outage	Scheduled refueling outage	Complete scheduled refueling outage
Robinson	2	None					

**Duke Energy Progress
Base Load Power Plant
Performance Review Plan
April 2018**

Lee Energy Complex

Unit	Duration of Outage	Type of Outage	Cause of Outage		Reason Outage Occurred	Remedial Action Taken
1A	4/7/2018 12:09:00 AM To 4/20/2018 2:00:00 PM	Sch	5272	Gas Turbine - Boroscope Inspection	CT and HRSG Inspections	
1B	4/7/2018 1:28:00 AM To 4/20/2018 2:00:00 PM	Sch	5272	Gas Turbine - Boroscope Inspection	CT and HRSG Inspections	
1C	4/7/2018 1:12:00 AM To 4/20/2018 2:00:00 PM	Sch	5272	Gas Turbine - Boroscope Inspection	CT and HRSG Inspections	
ST1	4/6/2018 9:37:00 PM To 4/21/2018 10:05:00 AM	Sch	3112	Condenser Tube Fouling Tube Side	Planned outage for CT, HRSG Inspections. Hotwell insp. and condenser tube cleaning	

Richmond County Station

Unit	Duration of Outage	Type of Outage	Cause of Outage		Reason Outage Occurred	Remedial Action Taken
9	3/29/2018 2:17:00 AM To 4/18/2018 11:27:00 AM	Sch	5272	Gas Turbine - Boroscope Inspection	PB5 spring outage	
9	4/23/2018 7:20:00 AM To 4/23/2018 7:28:00 PM	Unsch	3430	Feedwater Regulating (Boiler Level Control) Valve	U9 tripped to low HP Drum Level	
10	3/29/2018 2:17:00 AM To 4/18/2018 10:47:00 AM	Sch	5272	Gas Turbine - Boroscope Inspection	PB5 spring outage	
10	4/18/2018 11:19:00 PM To 4/18/2018 11:43:00 PM	Unsch	3430	Feedwater Regulating (Boiler Level Control) Valve	Unit tripped to low IP Drum Level	
10	4/18/2018 11:54:00 PM To 4/19/2018 12:47:00 AM	Unsch	5048	Gas Fuel System with controls and instruments	Unit tripped on sequence 4 failure to accelerate	
ST5	3/29/2018 1:59:00 AM To 4/19/2018 2:45:00 AM	Sch	4401	Inspection	ST5 in planned outage for MSCV inspection.	

Notes:

- Units in commercial operation for the full month are presented. Pre-commercial or partial month commercial operations are not included.

**Duke Energy Progress
Base Load Power Plant
Performance Review Plan
April 2018**

Sutton Energy Complex

Unit	Duration of Outage	Type of Outage	Cause of Outage		Reason Outage Occurred	Remedial Action Taken
1A	4/14/2018 2:26:00 AM To 5/13/2018 10:34:00 PM	Sch	5260	Major Gas Turbine Overhaul	Hot gas path outage	
1B	4/12/2018 4:23:00 PM To 4/14/2018 12:00:00 AM	Sch	5075	Blade Path Temperature Spread	Unit would not start due to blade path spread	
1B	4/14/2018 12:00:00 AM To 5/1/2018 12:00:00 AM	Sch	5260	Major Gas Turbine Overhaul	Hot gas path outage	
ST1	4/12/2018 4:08:00 PM To 4/12/2018 5:02:00 PM	Sch	4720	Generator Synchronization Equipment	Failed to sync	
ST1	4/12/2018 5:04:00 PM To 4/12/2018 5:45:00 PM	Sch	4499	Other Miscellaneous Steam Turbine Problems	Tripped on HP turbine exhaust temp	
ST1	4/12/2018 5:47:00 PM To 4/12/2018 7:39:00 PM	Sch	4499	Other Miscellaneous Steam Turbine Problems	Tripped on HP turbine exhaust temp	
ST1	4/12/2018 7:42:00 PM To 4/12/2018 8:33:00 PM	Sch	4499	Other Miscellaneous Steam Turbine Problems	Tripped on HP turbine exhaust temp	
ST1	4/12/2018 8:34:00 PM To 4/12/2018 9:40:00 PM	Sch	4499	Other Miscellaneous Steam Turbine Problems	Tripped on HP turbine exhaust temp	
ST1	4/12/2018 11:45:00 PM To 4/13/2018 1:25:00 AM	Sch	6164	HP Startup bypass instrumentation and controls	Bypass valve feedback bad quality	
ST1	4/13/2018 1:29:00 AM To 4/13/2018 3:58:00 AM	Sch	4499	Other Miscellaneous Steam Turbine Problems	Tripped on HP turbine exhaust temp	
ST1	4/14/2018 1:40:00 AM To 5/1/2018 12:00:00 AM	Sch	5270	Gas Turbine - Hot End Inspection	Spring outage boroscope inspection of CT's	

Notes:

- Units in commercial operation for the full month are presented. Pre-commercial or partial month commercial operations are not included.

**Duke Energy Progress
Base Load Power Plant Performance Review Plan**

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**April 2018
Brunswick Nuclear Station**

	<u>Unit 1</u>	<u>Unit 2</u>		
(A) MDC (mW)	938	932		
(B) Period Hours	720	720		
(C) Net Gen (mWh) and Capacity Factor (%)	513,372	76.01	667,889	99.53
(D) Net mWh Not Gen due to Full Schedule Outages	81,262	12.03	0	0.00
* (E) Net mWh Not Gen due to Partial Scheduled Outages	15,630	2.31	5,988	0.89
(F) Net mWh Not Gen due to Full Forced Outages	58,391	8.65	0	0.00
* (G) Net mWh Not Gen due to Partial Forced Outages	6,705	1.00	-2,837	-0.42
* (H) Net mWh Not Gen due to Economic Dispatch	0	0.00	0	0.00
* (I) Core Conservation	0	0.00	0	0.00
(J) Net mWh Possible in Period	675,360	100.00%	671,040	100.00%
(K) Equivalent Availability (%)		74.36		100.00
(L) Output Factor (%)		95.83		99.53
(M) Heat Rate (BTU/NkWh)		10,435		10,618

* Estimate
FOOTNOTE: D and F Include Ramping Losses

**Duke Energy Progress
Base Load Power Plant Performance Review Plan**

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**April 2018
Harris Nuclear Station**

Unit 1

(A) MDC (mW)	932	
(B) Period Hours	720	
(C) Net Gen (mWh) and Capacity Factor (%)	128,815	19.20
(D) Net mWh Not Gen due to Full Schedule Outages	534,828	79.70
* (E) Net mWh Not Gen due to Partial Scheduled Outages	7,397	1.10
(F) Net mWh Not Gen due to Full Forced Outages	0	0.00
* (G) Net mWh Not Gen due to Partial Forced Outages	0	0.00
* (H) Net mWh Not Gen due to Economic Dispatch	0	0.00
* (I) Core Conservation	0	0.00
(J) Net mWh Possible in Period	671,040	100.00%
(K) Equivalent Availability (%)		19.86
(L) Output Factor (%)		94.57
(M) Heat Rate (BTU/NkWh)		11,145

* Estimate

FOOTNOTE: D and F Include Ramping Losses

**Duke Energy Progress
Base Load Power Plant Performance Review Plan**

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**April 2018
Robinson Nuclear Station**

Unit 2

(A) MDC (mW)	741	
(B) Period Hours	720	
(C) Net Gen (mWh) and Capacity Factor (%)	562,807	105.49
(D) Net mWh Not Gen due to Full Schedule Outages	0	0.00
* (E) Net mWh Not Gen due to Partial Scheduled Outages	3,478	0.65
(F) Net mWh Not Gen due to Full Forced Outages	0	0.00
* (G) Net mWh Not Gen due to Partial Forced Outages	-32,765	-6.14
* (H) Net mWh Not Gen due to Economic Dispatch	0	0.00
* (I) Core Conservation	0	0.00
(J) Net mWh Possible in Period	533,520	100.00%
(K) Equivalent Availability (%)		99.35
(L) Output Factor (%)		105.49
(M) Heat Rate (BTU/NkWh)		10,144

* Estimate
FOOTNOTE: D and F Include Ramping Losses

**Duke Energy Progress
Base Load Power Plant
Performance Review Plan
April 2018**

Lee Energy Complex

	Unit 1A	Unit 1B	Unit 1C	Unit ST1	Block Total
(A) MDC (mW)	225	227	228	379	1,059
(B) Period Hrs	720	720	720	720	720
(C) Net Generation (mWh)	63,942	65,342	66,024	124,715	320,023
(D) Capacity Factor (%)	39.47	39.98	40.22	45.70	41.97
(E) Net mWh Not Generated due to Full Scheduled Outages	73,316	73,669	74,054	132,069	353,109
(F) Scheduled Outages: percent of Period Hrs	45.26	45.07	45.11	48.40	46.31
(G) Net mWh Not Generated due to Partial Scheduled Outages	10,839	11,271	11,461	186	33,756
(H) Scheduled Derates: percent of Period Hrs	6.69	6.90	6.98	0.07	4.43
(I) Net mWh Not Generated due to Full Forced Outages	0	0	0	0	0
(J) Forced Outages: percent of Period Hrs	0.00	0.00	0.00	0.00	0.00
(K) Net mWh Not Generated due to Partial Forced Outages	0	0	0	0	0
(L) Forced Derates: percent of Period Hrs	0.00	0.00	0.00	0.00	0.00
(M) Net mWh Not Generated due to Economic Dispatch	13,903	13,158	12,621	15,910	55,592
(N) Economic Dispatch: percent of Period Hrs	8.58	8.05	7.69	5.83	7.29
(O) Net mWh Possible in Period	162,000	163,440	164,160	272,880	762,480
(P) Equivalent Availability (%)	48.05	48.03	47.91	51.53	49.26
(Q) Output Factor (%)	78.37	76.61	77.08	90.91	82.12
(R) Heat Rate (BTU/NkWh)	9,167	9,238	9,154	4,134	7,218

Notes:

- Units in commercial operation for the full month are presented. Pre-commercial or partial month commercial operations are not included.
- (R) Includes Light Off BTU's

**Duke Energy Progress
Base Load Power Plant
Performance Review Plan
April 2018**

Richmond County Station

	Unit 7	Unit 8	Unit ST4	Block Total
(A) MDC (mW)	189	189	175	553
(B) Period Hrs	720	720	720	720
(C) Net Generation (mWh)	112,486	112,333	123,702	348,521
(D) Capacity Factor (%)	82.66	82.55	98.18	87.53
(E) Net mWh Not Generated due to Full Scheduled Outages	0	0	0	0
(F) Scheduled Outages: percent of Period Hrs	0.00	0.00	0.00	0.00
(G) Net mWh Not Generated due to Partial Scheduled Outages	12,600	12,960	2,160	27,720
(H) Scheduled Derates: percent of Period Hrs	9.26	9.52	1.71	6.96
(I) Net mWh Not Generated due to Full Forced Outages	0	0	0	0
(J) Forced Outages: percent of Period Hrs	0.00	0.00	0.00	0.00
(K) Net mWh Not Generated due to Partial Forced Outages	0	0	0	0
(L) Forced Derates: percent of Period Hrs	0.00	0.00	0.00	0.00
(M) Net mWh Not Generated due to Economic Dispatch	10,994	10,787	138	21,919
(N) Economic Dispatch: percent of Period Hrs	8.08	7.93	0.11	5.51
(O) Net mWh Possible in Period	136,080	136,080	126,000	398,160
(P) Equivalent Availability (%)	90.74	90.48	98.29	93.04
(Q) Output Factor (%)	83.71	83.69	99.99	88.84
(R) Heat Rate (BTU/NkWh)	10,923	10,857	0	7,025

Notes:

- Units in commercial operation for the full month are presented. Pre-commercial or partial month commercial operations are not included.
- (R) Includes Light Off BTU's

**Duke Energy Progress
Base Load Power Plant
Performance Review Plan
April 2018**

Richmond County Station

	Unit 9	Unit 10	Unit ST5	Block Total
(A) MDC (mW)	216	216	248	680
(B) Period Hrs	720	720	720	720
(C) Net Generation (mWh)	51,084	53,362	63,869	168,315
(D) Capacity Factor (%)	32.85	34.31	35.77	34.38
(E) Net mWh Not Generated due to Full Scheduled Outages	90,601	90,457	107,818	288,876
(F) Scheduled Outages: percent of Period Hrs	58.26	58.16	60.38	59.00
(G) Net mWh Not Generated due to Partial Scheduled Outages	6,057	6,149	0	12,205
(H) Scheduled Derates: percent of Period Hrs	3.89	3.95	0.00	2.49
(I) Net mWh Not Generated due to Full Forced Outages	2,621	277	0	2,898
(J) Forced Outages: percent of Period Hrs	1.69	0.18	0.00	0.59
(K) Net mWh Not Generated due to Partial Forced Outages	0	0	0	0
(L) Forced Derates: percent of Period Hrs	0.00	0.00	0.00	0.00
(M) Net mWh Not Generated due to Economic Dispatch	5,157	5,275	6,873	17,305
(N) Economic Dispatch: percent of Period Hrs	3.32	3.39	3.85	3.53
(O) Net mWh Possible in Period	155,520	155,520	178,560	489,600
(P) Equivalent Availability (%)	36.16	37.70	39.62	37.91
(Q) Output Factor (%)	82.32	82.85	90.28	85.35
(R) Heat Rate (BTU/NkWh)	11,092	11,033	0	6,864

Notes:

- Units in commercial operation for the full month are presented. Pre-commercial or partial month commercial operations are not included.
- (R) Includes Light Off BTU's

**Duke Energy Progress
Base Load Power Plant
Performance Review Plan
April 2018**

Sutton Energy Complex

	Unit 1A	Unit 1B	Unit ST1	Block Total
(A) MDC (mW)	224	224	271	719
(B) Period Hrs	720	720	720	720
(C) Net Generation (mWh)	54,595	50,945	64,031	169,571
(D) Capacity Factor (%)	33.85	31.59	32.82	32.76
(E) Net mWh Not Generated due to Full Scheduled Outages	90,847	98,474	112,704	302,025
(F) Scheduled Outages: percent of Period Hrs	56.33	61.06	57.76	58.34
(G) Net mWh Not Generated due to Partial Scheduled Outages	8,490	7,430	760	16,680
(H) Scheduled Derates: percent of Period Hrs	5.26	4.61	0.39	3.22
(I) Net mWh Not Generated due to Full Forced Outages	0	0	0	0
(J) Forced Outages: percent of Period Hrs	0.00	0.00	0.00	0.00
(K) Net mWh Not Generated due to Partial Forced Outages	0	0	2,886	2,886
(L) Forced Derates: percent of Period Hrs	0.00	0.00	1.48	0.56
(M) Net mWh Not Generated due to Economic Dispatch	7,348	4,431	14,738	26,517
(N) Economic Dispatch: percent of Period Hrs	4.56	2.75	7.55	5.12
(O) Net mWh Possible in Period	161,280	161,280	195,120	517,680
(P) Equivalent Availability (%)	38.41	34.34	40.37	37.88
(Q) Output Factor (%)	78.47	82.67	79.11	79.93
(R) Heat Rate (BTU/NkWh)	11,037	11,085	0	6,884

Notes:

- Units in commercial operation for the full month are presented. Pre-commercial or partial month commercial operations are not included.
- (R) Includes Light Off BTU's

**Duke Energy Progress
Intermediate Power Plant Performance
Review Plan
April 2018**

Mayo Station

Unit 1

(A) MDC (mW)	746
(B) Period Hrs	720
(C) Net Generation (mWh)	190,203
(D) Net mWh Possible in Period	537,120
(E) Equivalent Availability (%)	99.35
(F) Output Factor (%)	45.98
(G) Capacity Factor (%)	35.41

Notes:

- Units in commercial operation for the full month are presented. Pre-commercial or partial month commercial operations are not included.

**Duke Energy Progress
Intermediate Power Plant Performance
Review Plan
April 2018**

	Roxboro Station		
	Unit 2	Unit 3	Unit 4
(A) MDC (mW)	673	698	711
(B) Period Hrs	720	720	720
(C) Net Generation (mWh)	14,349	141,885	-670
(D) Net mWh Possible in Period	484,560	502,560	511,920
(E) Equivalent Availability (%)	14.15	61.62	0.00
(F) Output Factor (%)	30.46	50.64	0.00
(G) Capacity Factor (%)	2.96	28.23	0.00

Notes:

- Units in commercial operation for the full month are presented. Pre-commercial or partial month commercial operations are not included.

Duke Energy Progress
Base Load Power Plant Performance Review Plan

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May 2017 - April 2018
Brunswick Nuclear Station

	<u>Unit 1</u>	<u>Unit 2</u>		
(A) MDC (mW)	938	932		
(B) Period Hours	8760	8760		
(C) Net Gen (mWh) and Capacity Factor (%)	7,319,336	89.08	7,996,903	97.95
(D) Net mWh Not Gen due to Full Schedule Outages	733,172	8.92	0	0.00
* (E) Net mWh Not Gen due to Partial Scheduled Outages	140,048	1.70	37,200	0.46
(F) Net mWh Not Gen due to Full Forced Outages	58,391	0.71	33,117	0.41
* (G) Net mWh Not Gen due to Partial Forced Outages	-34,067	-0.41	97,100	1.18
* (H) Net mWh Not Gen due to Economic Dispatch	0	0.00	0	0.00
* (I) Core Conservation	0	0.00	0	0.00
(J) Net mWh Possible in Period	8,216,880	100.00%	8,164,320	100.00%
(K) Equivalent Availability (%)		89.28		98.31
(L) Output Factor (%)		98.57		98.35
(M) Heat Rate (BTU/NkWh)		10,462		10,743

* Estimate
 FOOTNOTE: D and F Include Ramping Losses

**Duke Energy Progress
Base Load Power Plant Performance Review Plan**

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**May 2017 - April 2018
Harris Nuclear Station**

Unit 1

(A) MDC (mW)	932	
(B) Period Hours	8760	
(C) Net Gen (mWh) and Capacity Factor (%)	7,518,476	92.36
(D) Net mWh Not Gen due to Full Schedule Outages	534,828	6.57
* (E) Net mWh Not Gen due to Partial Scheduled Outages	105,916	1.30
(F) Net mWh Not Gen due to Full Forced Outages	146,239	1.80
* (G) Net mWh Not Gen due to Partial Forced Outages	-164,663	-2.03
* (H) Net mWh Not Gen due to Economic Dispatch	0	0.00
* (I) Core Conservation	0	0.00
(J) Net mWh Possible in Period	8,140,796	100.00%
(K) Equivalent Availability (%)		90.11
(L) Output Factor (%)		100.76
(M) Heat Rate (BTU/NkWh)		10,597

* Estimate

FOOTNOTE: D and F Include Ramping Losses

Duke Energy Progress
Base Load Power Plant Performance Review Plan

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May 2017 - April 2018
Robinson Nuclear Station

Unit 2

(A) MDC (mW)	741	
(B) Period Hours	8760	
(C) Net Gen (mWh) and Capacity Factor (%)	6,776,877	104.40
(D) Net mWh Not Gen due to Full Schedule Outages	0	0.00
* (E) Net mWh Not Gen due to Partial Scheduled Outages	9,100	0.14
(F) Net mWh Not Gen due to Full Forced Outages	0	0.00
* (G) Net mWh Not Gen due to Partial Forced Outages	-294,817	-4.54
* (H) Net mWh Not Gen due to Economic Dispatch	0	0.00
* (I) Core Conservation	0	0.00
(J) Net mWh Possible in Period	6,491,160	100.00%
(K) Equivalent Availability (%)		99.86
(L) Output Factor (%)		104.40
(M) Heat Rate (BTU/NkWh)		10,282

* Estimate

FOOTNOTE: D and F Include Ramping Losses

**Duke Energy Progress
Base Load Power Plant
Performance Review Plan
May, 2017 through April, 2018**

Lee Energy Complex

	Unit 1A	Unit 1B	Unit 1C	Unit ST1	Block Total
(A) MDC (mW)	224	224	225	379	1,051
(B) Period Hrs	8,760	8,760	8,760	8,760	8,760
(C) Net Generation (mWh)	1,450,933	1,396,752	1,459,567	2,826,508	7,133,760
(D) Capacity Factor (%)	74.06	71.30	74.17	85.13	77.49
(E) Net mWh Not Generated due to Full Scheduled Outages	110,096	139,566	117,008	134,564	501,234
(F) Scheduled Outages: percent of Period Hrs	5.62	7.12	5.95	4.05	5.44
(G) Net mWh Not Generated due to Partial Scheduled Outages	260,122	249,525	255,870	107,584	873,102
(H) Scheduled Derates: percent of Period Hrs	13.28	12.74	13.00	3.24	9.48
(I) Net mWh Not Generated due to Full Forced Outages	598	2,913	3,089	0	6,600
(J) Forced Outages: percent of Period Hrs	0.03	0.15	0.16	0.00	0.07
(K) Net mWh Not Generated due to Partial Forced Outages	0	0	0	4,438	4,438
(L) Forced Derates: percent of Period Hrs	0.00	0.00	0.00	0.13	0.05
(M) Net mWh Not Generated due to Economic Dispatch	137,488	170,359	132,341	246,946	687,134
(N) Economic Dispatch: percent of Period Hrs	7.02	8.70	6.73	7.44	7.46
(O) Net mWh Possible in Period	1,959,238	1,959,115	1,967,875	3,320,040	9,206,268
(P) Equivalent Availability (%)	81.07	79.97	80.87	92.57	84.95
(Q) Output Factor (%)	78.82	78.94	79.36	88.83	82.65
(R) Heat Rate (BTU/NkWh)	9,098	9,131	9,046	4,362	7,218

Notes:

- Units in commercial operation for the full month are presented. Pre-commercial or partial month commercial operations are not included.
- (R) Includes Light Off BTU's

**Duke Energy Progress
Base Load Power Plant
Performance Review Plan
May, 2017 through April, 2018**

Richmond County Station

	Unit 7	Unit 8	Unit ST4	Block Total
(A) MDC (mW)	189	189	175	553
(B) Period Hrs	8,760	8,760	8,760	8,760
(C) Net Generation (mWh)	1,249,471	1,234,725	1,405,131	3,889,327
(D) Capacity Factor (%)	75.47	74.58	91.66	80.29
(E) Net mWh Not Generated due to Full Scheduled Outages	124,472	130,237	116,973	371,682
(F) Scheduled Outages: percent of Period Hrs	7.52	7.87	7.63	7.67
(G) Net mWh Not Generated due to Partial Scheduled Outages	168,235	171,427	30,084	369,746
(H) Scheduled Derates: percent of Period Hrs	10.16	10.35	1.96	7.63
(I) Net mWh Not Generated due to Full Forced Outages	0	3,585	747	4,331
(J) Forced Outages: percent of Period Hrs	0.00	0.22	0.05	0.09
(K) Net mWh Not Generated due to Partial Forced Outages	0	0	1,124	1,124
(L) Forced Derates: percent of Period Hrs	0.00	0.00	0.07	0.02
(M) Net mWh Not Generated due to Economic Dispatch	113,462	115,666	0	208,069
(N) Economic Dispatch: percent of Period Hrs	6.85	6.99	0.00	4.30
(O) Net mWh Possible in Period	1,655,640	1,655,640	1,533,000	4,844,280
(P) Equivalent Availability (%)	82.32	81.56	90.29	84.58
(Q) Output Factor (%)	81.69	81.33	99.44	87.19
(R) Heat Rate (BTU/NkWh)	11,404	11,210	0	7,222

Notes:

- Units in commercial operation for the full month are presented. Pre-commercial or partial month commercial operations are not included.
- (R) Includes Light Off BTU's

**Duke Energy Progress
Base Load Power Plant
Performance Review Plan
May, 2017 through April, 2018**

Richmond County Station

	Unit 9	Unit 10	Unit ST5	Block Total
(A) MDC (mW)	215	215	248	677
(B) Period Hrs	8,760	8,760	8,760	8,760
(C) Net Generation (mWh)	1,405,494	1,424,587	1,884,367	4,714,448
(D) Capacity Factor (%)	74.74	75.76	86.74	79.46
(E) Net mWh Not Generated due to Full Scheduled Outages	181,801	178,668	210,308	570,778
(F) Scheduled Outages: percent of Period Hrs	9.67	9.50	9.68	9.62
(G) Net mWh Not Generated due to Partial Scheduled Outages	186,471	183,954	6,782	377,207
(H) Scheduled Derates: percent of Period Hrs	9.92	9.78	0.31	6.36
(I) Net mWh Not Generated due to Full Forced Outages	20,513	3,944	0	24,457
(J) Forced Outages: percent of Period Hrs	1.09	0.21	0.00	0.41
(K) Net mWh Not Generated due to Partial Forced Outages	0	0	879	879
(L) Forced Derates: percent of Period Hrs	0.00	0.00	0.04	0.01
(M) Net mWh Not Generated due to Economic Dispatch	86,118	89,245	70,144	245,508
(N) Economic Dispatch: percent of Period Hrs	4.58	4.75	3.23	4.14
(O) Net mWh Possible in Period	1,880,398	1,880,398	2,172,480	5,933,276
(P) Equivalent Availability (%)	79.32	80.51	89.97	83.60
(Q) Output Factor (%)	84.08	83.99	96.03	88.45
(R) Heat Rate (BTU/NkWh)	11,381	11,331	0	6,817

Notes:

- Units in commercial operation for the full month are presented. Pre-commercial or partial month commercial operations are not included.
- (R) Includes Light Off BTU's

**Duke Energy Progress
Base Load Power Plant
Performance Review Plan
May, 2017 through April, 2018**

Sutton Energy Complex

	Unit 1A	Unit 1B	Unit ST1	Block Total
(A) MDC (mW)	225	225	268	718
(B) Period Hrs	8,760	8,760	8,760	8,760
(C) Net Generation (mWh)	1,327,963	1,376,174	1,639,469	4,343,606
(D) Capacity Factor (%)	67.47	69.92	69.75	69.09
(E) Net mWh Not Generated due to Full Scheduled Outages	201,443	164,988	237,526	603,956
(F) Scheduled Outages: percent of Period Hrs	10.24	8.38	10.11	9.61
(G) Net mWh Not Generated due to Partial Scheduled Outages	251,996	248,053	61,236	561,285
(H) Scheduled Derates: percent of Period Hrs	12.80	12.60	2.61	8.93
(I) Net mWh Not Generated due to Full Forced Outages	26,299	32,624	4,922	63,845
(J) Forced Outages: percent of Period Hrs	1.34	1.66	0.21	1.02
(K) Net mWh Not Generated due to Partial Forced Outages	0	0	21,621	21,621
(L) Forced Derates: percent of Period Hrs	0.00	0.00	0.92	0.34
(M) Net mWh Not Generated due to Economic Dispatch	160,421	146,282	385,662	692,364
(N) Economic Dispatch: percent of Period Hrs	8.15	7.43	16.41	11.01
(O) Net mWh Possible in Period	1,968,121	1,968,121	2,350,436	6,286,678
(P) Equivalent Availability (%)	75.62	77.36	86.20	80.11
(Q) Output Factor (%)	78.24	78.83	78.06	78.36
(R) Heat Rate (BTU/NkWh)	11,434	11,357	0	7,094

Notes:

- Units in commercial operation for the full month are presented. Pre-commercial or partial month commercial operations are not included.
- (R) Includes Light Off BTU's

**Duke Energy Progress
Intermediate Power Plant
Performance Review Plan
May, 2017 through April, 2018**

Mayo Station

Units	Unit 1
(A) MDC (mW)	746
(B) Period Hrs	8,760
(C) Net Generation (mWh)	1,571,298
(D) Net mWh Possible in Period	6,534,960
(E) Equivalent Availability (%)	89.25
(F) Output Factor (%)	49.09
(G) Capacity Factor (%)	24.04

Notes:

- Units in commercial operation for the full month are presented. Pre-commercial or partial month commercial operations are not included.

**Duke Energy Progress
Intermediate Power Plant
Performance Review Plan
May, 2017 through April, 2018**

Roxboro Station

Units	Unit 2	Unit 3	Unit 4
(A) MDC (mW)	673	698	711
(B) Period Hrs	8,760	8,760	8,760
(C) Net Generation (mWh)	1,800,838	2,398,090	1,406,644
(D) Net mWh Possible in Period	5,895,480	6,114,480	6,228,360
(E) Equivalent Availability (%)	79.24	84.29	47.38
(F) Output Factor (%)	62.56	56.88	64.67
(G) Capacity Factor (%)	30.55	39.22	22.58

Notes:

- Units in commercial operation for the full month are presented. Pre-commercial or partial month commercial operations are not included.

Duke Energy Progress
Outages for 100 mW or Larger Units
April, 2018

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<u>Unit Name</u>	<u>Capacity Rating (mW)</u>	<u>Full Outage Hours</u>		<u>Total</u>
		<u>Scheduled</u>	<u>Unscheduled</u>	
Brunswick 1	938	86.63	62.25	148.88
Brunswick 2	932	0.00	0.00	0.00
Harris 1	932	573.85	0.00	573.85
Robinson 2	741	0.00	0.00	0.00

Duke Energy Progress
Outages for 100 mW or Larger Units
April 2018

Unit Name	Capacity Rating (mW)	Full Outage Hours		Total Outage Hours
		Scheduled	Unscheduled	
Asheville Steam 1	192	0.00	39.15	39.15
Asheville Steam 2	192	0.00	0.00	0.00
Asheville CT 3	185	570.30	0.00	570.30
Asheville CT 4	185	0.00	0.00	0.00
Darlington CT 12	133	42.00	0.00	42.00
Darlington CT 13	133	66.00	0.00	66.00
Lee Energy Complex CC 1A	225	325.85	0.00	325.85
Lee Energy Complex CC 1B	227	324.53	0.00	324.53
Lee Energy Complex CC 1C	228	324.80	0.00	324.80
Lee Energy Complex CC ST1	379	348.47	0.00	348.47
Mayo Steam 1	746	0.00	0.00	0.00
Richmond County CT 1	189	511.52	0.03	511.55
Richmond County CT 2	187	360.00	0.00	360.00
Richmond County CT 3	185	42.00	0.00	42.00
Richmond County CT 4	186	192.00	0.00	192.00
Richmond County CT 6	187	0.00	0.00	0.00
Richmond County CC 7	189	0.00	0.00	0.00
Richmond County CC 8	189	0.00	0.00	0.00
Richmond County CC ST4	175	0.00	0.00	0.00
Richmond County CC 9	216	419.45	12.13	431.58
Richmond County CC 10	216	418.78	1.28	420.07
Richmond County CC ST5	248	434.75	0.00	434.75

Notes:

- Units in commercial operation for the full month are presented. Pre-commercial or partial month commercial operations are not included.

Duke Energy Progress
Outages for 100 mW or Larger Units
April 2018

Unit Name	Capacity Rating (mW)	Full Outage Hours		Total Outage Hours
		Scheduled	Unscheduled	
Roxboro Steam 1	380	408.00	0.00	408.00
Roxboro Steam 2	673	618.10	0.00	618.10
Roxboro Steam 3	698	240.00	17.32	257.32
Roxboro Steam 4	711	720.00	0.00	720.00
Sutton Energy Complex CC 1A	224	405.57	0.00	405.57
Sutton Energy Complex CC 1B	224	439.62	0.00	439.62
Sutton Energy Complex CC ST1	271	415.88	0.00	415.88
Wayne County CT 10	192	0.00	0.00	0.00
Wayne County CT 11	192	0.00	0.00	0.00
Wayne County CT 12	193	0.00	0.00	0.00
Wayne County CT 13	191	0.00	3.47	3.47
Wayne County CT 14	195	0.00	0.00	0.00

Notes:

- Units in commercial operation for the full month are presented. Pre-commercial or partial month commercial operations are not included.